REMARKS

Claims 1-14 remain pending in the application. Applicants thank the Examiner for allowing claims 1-7. Claims 8-14 stand rejected.

Claims 8-14 have been rejected under 35 USC §103(a) as being unpatentable over Poisner (U.S. Patent No. 6,012,154, hereinafter Poisner) in view of Kadnier, Windows NT 4: The Complete Reference (hereinafter Kadnier). Applicants respectfully submit that the rejection should be withdrawn, for the following reasons.

Independent claims 8 and 13 recite, in relevant parts, a "safety device for a stored-program control coupling a computer bus system with a peripheral bus system" to which a peripheral is connected, the safety device comprising: "a controller for exchanging data with the stored-program control, the stored-program control continually executing an SPS program on a real-time operating system, the stored-program control exchanging data, via the peripheral bus system, with a peripheral to be controlled." In support of the rejection, the Examiner makes the following assertion: "[a]lthough Poisner doesn't explicitly disclose that the expansion bus bridge has a controller, a controller for exchanging data with the processor (stored program control) is **inherent** to the system of Poisner because the **expansion bus bridge is capable of resetting the processor in response to not receiving data."** (Office Action, p. 2, paragraph 2b). Applicants respectfully submit that the above-noted assertion made by the Examiner is factually and legally incorrect, as explained below.

Regarding the Examiner's assertion that "a controller for exchanging data with the processor (stored program control) is inherent to the system of Poisner because the expansion bus bridge is capable of resetting the processor in response to not receiving data," Applicants note that nothing in the Poisner reference actually suggests that the expansion bridge resets the processor in response to not receiving data. In fact, Poisner clearly indicates that the "timer 232 is then periodically reset with the value stored in register 234 **by the software agent 212**," and if the timer

232 expires, an interrupt signal 224 is asserted to the processor 205, which interrupt signal 224 causes the processor to execute the interrupt handler 217. (Col. 4, l. 67 – col. 5, l. 7). Furthermore, Poisner further notes that "while the interrupt handler 217 is executing, **it periodically resets** the timer 232 in order to prevent it from expiring again," and "[i]f the timer 232 expires a second time, a reset signal 222 is sent to the processor." (Col. 5, l. 12-16). Accordingly, Poisner clearly indicates that control of the reset signal 222 sent to the processor 205 is not performed by an internal control element within the expansion bus bridge; instead, **the control of the reset signal 222 is performed by the software agent 212 and the interrupt handler 217.**

Even if one assumed for the sake of argument that the expansion bus bridge was somehow involved in the control of the reset signal 222 sent to the processor 205, there is absolutely no reason why a controller for exchanging data with the processor would have to exist within the expansion bus bridge (the Examiner's asserted equivalent of the claimed "safety device") of Poisner. In order to rely on the doctrine of inherent disclosure, which the Examiner has invoked in support of the rejection, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics **necessarily flow** from the teachings of the applied art." M.P.E.P § 2112 (emphasis in original); see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Interf. 1990). Thus, the M.P.E.P. and the case law make clear that simply because a certain result or characteristic may occur in the prior art does not establish the inherence of that result or characteristic. The teachings of Poisner clearly fail to satisfy this test, since not only is there absolutely no reason why a controller for exchanging data with the processor would have to exist within the expansion bus bridge (the Examiner's asserted equivalent of the claimed "safety device") of Poisner, but Poisner explicitly teaches that the control of the reset signal 222 sent to the processor 205 is not performed by an internal control element within the expansion bus bridge, but rather by external control elements, i.e., the software agent 212 and the interrupt handler 217. Accordingly, Applicants respectfully submit that Poisner fails to teach or suggest "a controller for exchanging data with the stored-program control," as recited in independent claims 8 and 13.

Regarding the Examiner's assertion that "[i]n column 2, lines 31-52 and in Figure 2, Poisner discloses an operating system-related software agent **running on a processor that is separate from the processor** (the stored-program control)," Applicants respectfully note that this assertion clearly undermines the Examiner's contention that Poisner teaches a processor that is equivalent to the claimed "stored-program control." Claims 8 and 13 recite, in relevant parts, "a controller for exchanging data with the stored-program control, **the stored-program control continually executing an SPS program on a real-time operating system**." According to claims 8 and 13, the "stored-program control" that exchanges data with the "controller" is the same element that executes "an SPS program on a real-time operating system." However, according to the Examiner's assertion, the processor that executes an operating system-related software agent is **separate** from the stored-program control in Poisner, which means the stored-program control in Poisner doesn't "continually execute an SPS program on a real-time operating system."

For the foregoing reasons, Applicants respectfully submit that Poisner fails to teach a safety device which includes "a controller for exchanging data with the stored-program control, the stored-program control continually executing an SPS program on a real-time operating system," as recited in independent claims 8 and 13.

Since the Kadnier reference merely gives an overview of "real-time systems" and fails to cure the deficiencies of the Poisner reference discussed above in connection with independent claims 8 and 13, it is respectfully submitted that the combination of Poisner and Kadnier references does not render obvious independent claims 8 and 13. Similarly, the combination of Poisner and Kadnier references fails to render obvious dependent claims 9-12 and 14. Withdrawal of the rejection of claims 8-14 under 35 USC §103(a) is therefore respectfully requested.

CONCLUSION

In light of the above discussion, Applicants respectfully submit that claims 8-14 are in allowable condition. Applicants earnestly solicit favorable reconsideration and early issuance of a Notice of Allowance.

The Examiner is invited to contact the undersigned attorney to discuss any matter concerning this application. The Office is authorized to charge any fees under 37 C.F.R. §§1.16 or 1.17 related to this communication to Deposit Account No. 11-0600.

Respectfully submitted,
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Dated: 5/11/04

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